



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ES 005-P/WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/CH2003/000828	International filing date (day/month/year) 17 December 2003 (17.12.2003)	Priority date (day/month/year) 17 December 2002 (17.12.2002)
International Patent Classification (IPC) or national classification and IPC A23P 1/12, B29C 47/04, 47/30		
Applicant BÜHLER AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 16 April 2004 (16.04.2004)	Date of completion of this report 30 March 2005 (30.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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1. Basis of the report

1. With regard to the elements of the international application:*

the international application as originally filed

the description:

pages _____ 4, 5 _____, as originally filed

pages _____, filed with the demand

pages _____ 1, 1a, 2, 2a, 3 _____, filed with the letter of 06 January 2005 (06.01.2005)

the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19)

pages _____, filed with the demand

pages _____ 1-7 _____, filed with the letter of 06 January 2005 (06.01.2005)

the drawings:

pages _____ 1/5-5/5 _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

the language of publication of the international application (under Rule 48.3(b)).

the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages _____

the claims, Nos. _____

the drawings, sheets/fig _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: FR-A-2572898

D2: US-A-4835000

2. The following observations are made with regard to PCT Article 33(2).

2.1 Document D1 discloses a method for producing coloured feedstuffs or foodstuffs or the like by extrusion, with the admixture of colourants to a product and the extrusion or expansion of the product-colourant mixture, the product stream being subdivided into independent substreams depending on the number of different colourants, each colourant being mixed with only a substream, and the substreams being combined only shortly before they exit a processing device, in such a way that the finished product retains different coloured zones, as defined in the preamble of claim 1; cf. page 5, lines 10-24, and figures 2 and 3.

The subject matter of claim 1 therefore differs from

the prior art known from D1 in that the substreams of different colours exit the device through a nozzle arrangement having ducts with flow-regulating elements that modify the stream cross-section, and in that the premixed coloured product streams are combined only when they pass through the outlet nozzle.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

The objective problem addressed by claim 1 is that of creating a clearly defined colour differentiation in extruded products having two or more colours and a great diversity of shapes and coloured designs; cf. page 1a, lines 4-7.

The solution proposed in claim 1 of the present application appears to involve an inventive step because the prior art does not contain any hints of the use of ducts having flow-regulating elements that modify the stream cross-section in order to solve the objective problem addressed by claim 1.

Claim 1 therefore meets the requirement of PCT Article 33(3).

2.2 Document D1 discloses a device for producing coloured feedstuffs or foodstuffs or technical products using an extruder or expander having a nozzle plate with a plurality of nozzles (13, 14) through which a coloured product is output, a mixing section (II) being arranged downstream of the extruder, in the product flow direction. The mixing section (II) comprises for each colourant a mixing

screw (34, 44) arranged in a mixing chamber (5), as well as a downstream nozzle arrangement which contains ducts that lead from the mixing chambers (5) to nozzles (13, 14) in a nozzle plate (6), as defined in the preamble of claim 6; cf. page 5, lines 10-24, and figures 2 and 3.

The subject matter of claim 6 therefore differs from the prior art known from D1 in that the ducts comprise flow-regulating elements that modify the stream cross-section, and in that the ducts from the various independent mixing chambers are combined only shortly before the nozzle plate.

The subject matter of claim 6 is therefore novel (PCT Article 33(2)).

The objective problem addressed by claim 1 is that of creating a clearly defined colour differentiation in extruded products having two or more colours and a great diversity of shapes and coloured designs; cf. page 1a, lines 4-7.

The solution to this problem, as proposed in claim 6 of the present application, appears to involve an inventive step because the prior art does not contain any hints of ducts having flow-regulating elements that modify the stream cross-section and permit the production of a great diversity of product shapes and coloured designs.

Claim 6 therefore meets the requirement of PCT Article 33(3).

3. Claims 2-5 are dependent on claim 1 and therefore

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likewise meet the PCT novelty and inventive step requirements.

Claim 7 is dependent on claim 6 and therefore likewise meets the PCT novelty and inventive step requirements.

4. Claims 1-7 meet the requirement of PCT Article 33(4).

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